

## 1. General

Nearly 20 years ago we developed our quick-disconnect couplings for dialysis. The name states its intended use – a fast connection between dialysis equipment and the filter cartridges that are replaced after each patient. This market has undergone rapid change in recent years and new dialysis equipment suppliers were soon calling for action. As a consequence, price became a major issue and so we were under pressure to act. We decided to revise the quick-disconnect coupling for dialysis, which is why we held in-depth discussions with our key customers. In order to realise competitive market prices, we have decided to manufacture the couplings by means of injection moulding.

And the result is

## 2. The new safety coupling

### 2.1. Customer analysis

In our talks with customers we heard over and over again how important the safety aspect was. But what does safety mean? There were many different answers to this question, albeit none of the discussions involved leak-tightness in the open or closed position because this is a matter of fact. The main issue was the operating safety. For example, questions like “How can you be sure that the coupling is connected to the right nipple?” or “How do I tell if the coupling is connected correctly to the nipple?” came up. Together we found solutions for these problems.

The colour coding on both coupling and nipple prevents mix-ups. A safety lock prevents unintentional release.

### 2.2. New name

We have decided to take these unique improvements up into the name as well. On the one hand, it clearly separates us from the competition and on the other hand this new name opens up new markets for us.

### 2.3. Market

PVDF is often unfairly overshadowed by the popular materials PTFE and PFA. True, in direct comparison, its temperature resistance is lower, but this weakness is more than compensated by the outstanding price-performance ratio. If we consider its excellent mechanical properties, it is inexplicable why this material is not used more often. The applications are as diverse as the range of chemical resistance.

### 2.4. Segments

The target group includes mainly developers and design engineers in Germany in the market segments: machine building, water treatment, and the life science industry.

## Product information

### 2.5. Product benefits

- Completely in PVDF
- No material mix
- Ergonomic design
- High flow rate
- Angled version
- Optical lock indicator
- Additional safety lock
- Coloured sliding sleeve
- Colour coding also on nipple
- Minimal dead space
- Smooth surfaces

Extensive argumentation is enclosed.

### 2.6. Product range

After close examination of the product range, we have come up with a new, optimised product range. It appeared that certain sizes were hardly ever requested or never at all; these will naturally be discontinued. A detailed overview including a comparison of the old dialysis range vs. the new safety coupling can be found in the enclosed.

### 2.7. Versions

#### 2.7.1. Standard

The couplings are now supplied with **blue sliding sleeves**.

This makes them easier to recognise and also differentiates our products from the competition. The coupling and nipple are still offered with and without valves.

Seal: FPM

This quality offers the greatest range of uses in terms of media and chemical resistance.

The **green** safety ring

is the most important safety feature and is used on all couplings. When it is visible, it indicates that the coupling has been connected to the nipple correctly.

Important:

If the additional safety lock is requested, it is used in place of the safety ring. Having both together, safety ring and safety lock, is not possible.

#### 2.7.2. Options

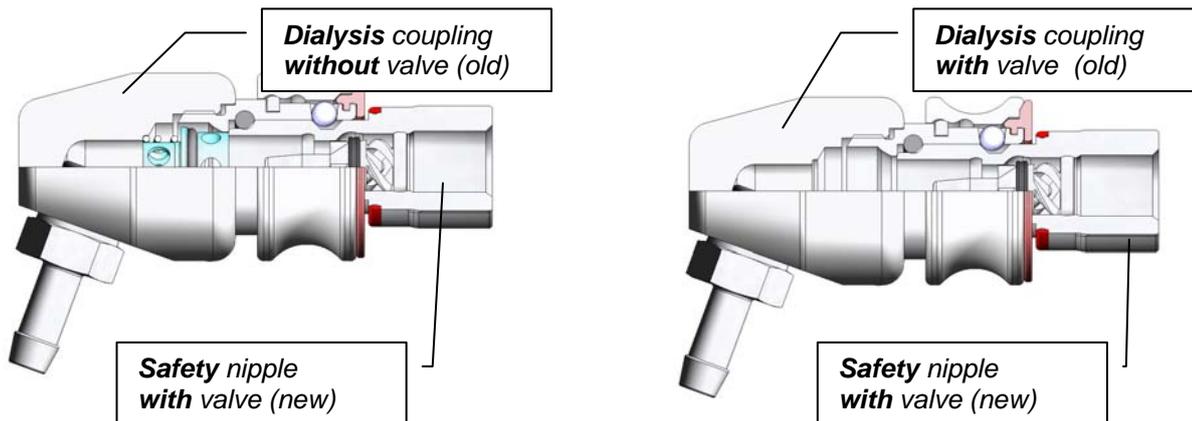
Seals : EPDM and silicone

Design: : with white or blue sliding sleeve,  
with safety lock.

Product information

**2.8. Compatibility**

In general, the safety couplings can be used with the old "dialysis couplings". Only the following combinations are not possible.



**2.9. Material description**

To emphasise the differences between the two couplings, the safety couplings have been given a new code number. This should also reduce the danger of mix-ups.

C O	K A /	B -	S O	T -	L W 6 -	P	V
CO Kuppler	K Kuppler standard ohne Ventil KU Kuppler abgewinkelt ohne Ventil KA Kuppler mit Ventil KAU Kuppler mit Ventil abgewinkelt T Stecker ohne Ventil TA Stecker mit Ventil	N neutral (weiss) B blau* R rot* S mit Sicherung* F ohne Rückstellfeder* SF mit Sicherung ohne Rückstellfeder*	SO SERTO	T Schlauchdüse I Innengewinde S SERTO-Anschluss	LW4 Anschlussgröße für Schlauch id 6mm 1/4 G = Rohrgewinde zylindrisch - 6 = Für Rohraussendurchmesser 6mm	P PVDF	V FPM E EPDM* S Silikon*

\*optional

**3. Quality**

The new safety coupling was tested thoroughly in a series of diverse tests. Particular attention was given to the flange. Below is a rough overview of the tests which were conducted.

- Material fatigue tests: valve cone, return spring, flange
- Temperature endurance tests
- Pressure-temperature tests
- Leak tests
- Sterilisation test

All the tests were completed successfully.

### Product information

#### 4. Prices

The gross sales prices for the safety couplings have been lowered. So the new prices are absolutely competitive.

#### 5. Communication

##### 5.1. Free samples

We are the first company in the capital goods market to offer free samples to qualified customers. To achieve the desired effect in the targeted sales figures (we hope to achieve a significant increase), we will communicate this strategy in advertisements (4-coloured, full-page) in the German market.

Sample :

Coupling : CO KA/B-SOS-8PV                      Mat.No.: 358.0208.000

Nipple : CO T/B-SOI-G 1/4" PV                      Mat.No.: 358.5114.010

The samples can be ordered by phone, fax or starting in autumn 2010 via internet.

##### 5.2. Sales

To realise the greatest possible benefit from the free samples, they should be delivered in person.

##### 5.3. Advertising

As mentioned above, we want to achieve higher brand awareness for SERTO with ads in trade journals, specially those read by developers and design engineers. The focus is on comparisons between familiar products that are associated with safety, like helmets, pylons, etc., and our safety coupling. The slogan we plan to use is "in principle safe – on principle safer".

The ad is also used in the new price lists.

##### 5.4. Brochure

To support our sales staff we will be issuing a brochure with technical information, sales arguments and supplemented with the new product range. This brochure will be a one-off publication since the products will be taken up in the next catalogue.

##### 5.5. Press releases

The press has already been informed of this novel product and it has been well received by the publishers. (Press review is available.)

As soon as the article has got a foothold in the market, we plan to publish a user report.  
Press texts are also available.

Product information

**6. Substitution / Introduction**

**6.1. Existing version**

**6.1.3. Phase out without replacement**

The existing version will be phased out by 31.03.2010. This means that those articles which are no longer to be found in the new product range will not be offered anymore after they have been sold off. If necessary, these articles will be treated like special parts similar to standard products. A user analysis from last year within the SERTO Group has shown that no problems are expected here.

**6.1.4. Phase out with replacement**

Those articles for which there is a substitute in the new product range will be replaced gradually. The remaining quick-disconnect couplings for dialysis will be sold off. As soon as there are none left in stock, we will convert to the safety couplings. In any case, we will make sure that no old and new products are delivered in the same shipment.

**6.2. New version**

The new safety coupling is available as of 1<sup>st</sup> April and can be sold to customers starting from this date.

**7. Time schedule**

March	April	May	June	July	Aug.	Sept.	Oct.	Nov.			
Introduction Safety coupling											
Phase out dialysis coupling											
			Brochure available								

Create ad